



# Maryland Influenza Plan

## 2014-2015 Flu Season

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## I. INTRODUCTION

Influenza (“flu”) is a contagious respiratory illness caused by the influenza virus. Influenza virus strains perennially circulate throughout the world. In the northern hemisphere, flu season can begin as early as October and last as late as May. The flu virus can cause mild to severe illness and at times can lead to death. Older people, young children, and people with certain health conditions are at higher risk for serious flu complications. **The best way to prevent the flu is by getting vaccinated each year.**

Influenza is spread by airborne droplets made when an infected person coughs, sneezes, or talks. Less often, a person might also get flu by touching a surface or object that has flu virus on it and then touching their own mouth, eyes, or nose.

You may be able to pass on the flu to someone else even before you know you are sick, as well as while you are sick. Most healthy adults may be able to infect others beginning 1 day before symptoms develop and up to 5-7 days after becoming sick. Some people, especially children and people with weakened immune systems, might be able to infect others for an even longer time.

Flu seasons occur each year with varying severity. Estimates of flu-associated deaths range from a low of about 3,000 to a high of about 49,000 people in the United States per year between 1976 and 2006.

During 2009-2010, a new and very different flu virus called 2009 H1N1 spread worldwide causing the first flu pandemic in more than 40 years. It is estimated that the 2009 H1N1 pandemic resulted in more than 12,000 flu-related deaths in the U.S. In contrast to typical flu seasons, nearly 90 percent of the deaths occurred among people younger than 65 years of age.

### Additional Resources

CDC Flu Information: <http://www.cdc.gov/flu/>

Maryland Flu Information: <http://flu.maryland.gov>

Maryland Flu Surveillance: <http://phpa.dhmh.maryland.gov/influenza/fluwatch/SitePages/Home.aspx>

## II. PURPOSE

The Maryland Department of Health and Mental Hygiene (DHMH) developed the Maryland Influenza Plan in order to prepare for, prevent, and mitigate the number and severity of influenza cases within the state. Both residents and public health personnel can pacify seasonal influenza. This plan acts as a guide for Maryland residents, public health departments, and the healthcare community. The Maryland Influenza Plan will categorize flu activity by stages and include information for each audience type. Additionally, this document includes high impact and pandemic threat triggers that can aid in the identification of outlier influenza activity potentially caused by an unusual flu season or a pandemic.



### III. DEFINITIONS

*Antiviral Medications* – prescription medications that can be used to prevent or treat the flu

*Community Prevention and Mitigation* – tactics used by public health officials and the general public to reduce the effects of the flu

*Early Flu Activity* - Early flu activity is characterized by the presence of some confirmed cases of influenza in Maryland. Geographic spread of influenza in Maryland is either sporadic or local and ILI intensity is minimal or low

*ESSENCE* – Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) is a system used to gather, manage, and analyze health-related data to identify early warning of public health threats, hazards, and incidents

*Influenza-like Illness (ILI)* – medical diagnosis that indicates a possible influenza infection but has not been confirmed by a laboratory test

*Influenza Vaccination* – preventive medical intervention administered through an injectable or nasal spray that reduces the likelihood of an individual being infected by seasonal flu

*Late Flu Activity* - Late flu activity is characterized by decreasing levels of influenza in Maryland

*MRITS* –Maryland Resident Influenza Tracking Survey (MRITS) is an online system designed to measure ILI in Maryland based on illness reported directly by residents each week

*Pandemic Influenza* – a flu pandemic occurs when a novel influenza A virus emerges for which there is no or little immunity in the human population. In the past, pandemic strains have caused serious illness and have spread easily from person-to-person worldwide

*Peak Flu Activity* - Peak flu activity is characterized by an increase in confirmed cases of influenza in Maryland. Geographic spread of influenza in Maryland is either regional or widespread and ILI intensity is moderate or high

*Pre Flu Activity* - Pre flu activity is characterized by the absence or minimal presence of influenza throughout Maryland prior to the beginning of flu season

*Seasonal Influenza* – annual outbreaks of flu that typically occur during the late fall through early spring. Most people have natural immunity, and a seasonal flu vaccine is available each year. In a typical year, approximately 5 to 20 percent of the population gets the seasonal flu

*Social Distancing* - a set of nonpharmaceutical intervention tactics with the purpose of reducing the number of close interpersonal contact and the spread of influenza

*Surveillance* – epidemiological activities of gathering and analyzing data to provide situational awareness

## **IV. PRE FLU ACTIVITY**

**DEFINITION:** *Pre flu activity is characterized by the absence or minimal presence of influenza throughout Maryland prior to the beginning of flu season.*

**TIME PERIOD:** *Prior to the first laboratory-confirmed case of influenza in Maryland; typically June through September*

### **Tips for Maryland Residents**

- ❖ The best way to prevent influenza is by being vaccinated. Vaccination will be most effective if you receive a flu shot or intranasal mist in the summer or fall
- ❖ Identify the best location to receive your annual flu vaccination. Many primary-care physicians have the vaccine available. Vaccine is also available at pharmacies and health clinics and can be found here: <http://flushot.healthmap.org/>
- ❖ Live a healthy lifestyle. This includes regularly washing your hands, avoid touching your eyes, nose, and mouth, and avoiding close contact with sick people
- ❖ Register for the Maryland Resident Influenza Tracking Survey: <http://flusurvey.dhmh.md.gov/>

### **State and Local Health Department Actions**

#### *Epidemiological and Laboratory*

- Coordinate with the Centers for Disease Control and Prevention (CDC) to identify likely flu strains that could affect Maryland during next flu season
- Monitor any disease outbreaks with patients exhibiting upper-respiratory infections or symptoms of influenza-like illness (ILI)
- Monitor ILI-activity in hospital emergency departments in the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) for statistically significant warnings and threats
- Conduct laboratory testing to identify and confirm any flu cases prior to the beginning of flu season or early flu activity stage
- Monitor flu activity in the southern hemisphere to inform decision-making

#### *Communication and Public Information*

- Develop materials and coordinate public health messaging; encourage vaccination
- Provide information for healthcare community, including recommendations on vaccine ordering and availability and current vaccine information sheets (VIS)
- Provide update on vaccine supplies and distribution

- Announce seasonal flu clinics at schools and local health departments
- Provide media with preventive measures including hand washing and cough etiquette
- Hold a flu vaccination kick-off event with senior DHMH leadership

#### *Community Prevention and Mitigation*

- Assess cache of medical countermeasures and equipment
- Update antiviral medications distribution plan and influenza plan
- Issue a letter to clinicians to encourage the promotion of seasonal flu vaccination in patients
- Receive and distribute vaccine to local providers and local health departments within the vaccines for children (VFC) program

#### **Healthcare Systems and Providers Actions**

- Conduct vaccination clinics, including school flu vaccination clinics
- Vaccinate healthcare workers
- Review plans and prevention strategies for seasonal influenza in the healthcare setting, including implementation of respiratory hygiene, appropriate management of ill staff, and infection control precautions. CDC guidance can be found:  
<http://www.cdc.gov/flu/professionals/infectioncontrol/healthcaresettings.htm>

#### **High Impact and Pandemic Threat Warning**

- ESSENCE data that suggest a significant increase in ILI outside of typical flu season
- Outbreak or multiple outbreaks of ILI outside of typical flu season

## V. Early Flu Activity

**DEFINITION:** *Early flu activity is characterized by the presence of one or more confirmed cases of influenza in Maryland. Geographic spread of influenza in Maryland is either sporadic or local and ILI intensity is minimal or low.*

**TIME PERIOD:** *Beginning after the first laboratory-confirmed case of influenza in Maryland has been identified and lasting until influenza increases in intensity and spread.*

### Tips for Maryland Residents

- ❖ Get vaccinated against the flu if you have not done so already. Vaccination is the best way to prevent influenza
- ❖ Continue to practice hand hygiene and cough etiquette, such as coughing into your sleeve
- ❖ Stay informed by monitoring DHMH's influenza surveillance reporting website:  
<http://phpa.dhmh.maryland.gov/influenza/fluwatch/SitePages/Home.aspx>

### State and Local Health Department Actions

#### *Epidemiological and Laboratory*

- Examine data obtained from ILINet sentinel providers
- Monitor the Maryland Resident Influenza Tracking Survey (MRITS)
- Monitor and review ESSENCE hospital emergency department ILI data
- Investigate influenza / ILI outbreaks
- Monitor severity of virus including number of hospitalizations and deaths
- Monitor reportable conditions related to flu including pneumonia cases in healthcare workers, hospitalizations, pediatric flu deaths, and novel strains of Type A influenza
- Monitor ILI-activity in hospital emergency departments in ESSENCE for statistically significant warnings and threats
- Monitor hospital emergency department status, intensive care units, and hospital bed capacities
- Provide confirmatory testing of viral specimens in DHMH laboratory
- Monitor characterization of virus including subtypes and resistance to antiviral medications
- Monitor vaccine supply and availability
- Provide recommendations regarding the use of antiviral medications

#### *Communication and Public Information*

- Issue a press release and blog post announcing the first case of influenza in Maryland
- Provide educational messages including vaccine promotion and steps to take if you get sick
- Announce seasonal flu clinic dates and locations
- Communicate disease severity and monitor news coverage

#### *Community Prevention and Mitigation*

- DHMH reports first confirmed flu case to healthcare and preparedness partners, including the Maryland Joint Operations Center (MJOC)
- Issue information on first cases of influenza to local public health and healthcare partners. Consider conducting a conference call for more specific information sharing needs
- Collaborate with CDC regarding guidance and recommendations for use of antiviral medications

### **Healthcare Systems and Providers Actions**

- Continue to conduct vaccination clinics, including flu clinics at schools
- Healthcare systems should continue to vaccinate healthcare workers
- Clinicians should emphasize seasonal flu vaccine for patients, especially those in risk categories for complications due to influenza
- Implement infection control practices in the healthcare settings. This may include adherence to standard precautions for hand hygiene and use of personal protective equipment

### **High Impact and Pandemic Threat Warning**

- Laboratory suspected or confirmed test showing a novel strain of influenza
- Initial severe flu cases (hospitalizations or deaths) in atypical population, such as healthy adults

## VI. Peak Flu Activity

**DEFINITION:** *Peak flu activity is characterized by an increase in confirmed cases of influenza in Maryland. Geographic spread of influenza in Maryland is either regional or widespread and ILI intensity is moderate or high.*

**TIME PERIOD:** *Peak flu activity typically occurs during the winter; however, each flu season is different. Peak flu activity is occurring when greater than 15% of influenza tests from sentinel laboratories are positive for the virus.*

### Tips for Maryland Residents

- Avoid direct contact with ill people whenever possible. Continue to practice hand hygiene by washing your hands often
- Remain at home and avoid contact with other people if you have flu-like symptoms or do not feel well. Use proper cough and sneeze etiquette if you are sick
- Know the warning signs that require urgent medical attention including high or prolonged fever, shortness of breath, dehydration, chest pain, and fainting
- Stay informed by monitoring DHMH's influenza surveillance reporting website:  
<http://phpa.dhmd.maryland.gov/influenza/fluwatch/SitePages/Home.aspx>

### State and Local Health Department Actions

#### *Epidemiological and Laboratory*

- Monitor changes in viral characteristics, including antiviral resistance
- Monitor adverse reactions to vaccine
- Continue to investigate influenza outbreaks
- Monitor geographic spread and intensity of influenza
- Monitor information that could indicate a severe flu impact, such as influenza hospitalization rate, school absenteeism rate, and morbidity and mortality rate

#### *Communication and Public Information*

- Continue to provide educational messages including vaccine promotion, disease characteristics, and steps to take if you get sick
- Communicate disease severity and alerts and monitor news coverage
- Guidance on avoiding hospital emergency departments unless illness is severe

- Provide information regarding mitigating medications, if applicable

#### *Community Prevention and Mitigation*

- Conduct a conference call with healthcare partners and health departments to provide guidance and assess the status of seasonal influenza in Maryland
- Monitor the status of antiviral medications in the commercial supply chain on a weekly basis
- Monitor statewide hospital bed availability through the Maryland Institute for Emergency Medical Services System (MIEMSS)
- If necessary, activate MD Responds professional volunteers to provide support to local health departments vaccination clinics

#### **Healthcare Systems and Providers Actions**

- Use caution when performing aerosol-generating procedures and only perform these procedures on patients with confirmed or suspected influenza if they are medically necessary
- Manage visitor access and movement within the facility
- Implement environmental infection control and ensure standard disinfection procedures are occurring in patient-care areas
- Continue vaccinating patients and focus vaccination efforts on high risk, underserved, and healthcare worker populations

#### **High Impact and Pandemic Threat Warning**

- Laboratory suspected or confirmed test showing a novel strain of influenza
- Significantly higher severity in flu cases in comparison to previous years

# SEVERE FLU IMPACT

Peak seasonal flu activity is characterized by an increase in the spread and/or intensity of influenza. Particularly severe seasons may cause a severe flu impact. A severe flu impact is characterized by flu activity that greatly affects health systems and the community.

State health officials regularly review a number of factors that might trigger a severe flu impact. The following are primary factors for determining a severe flu impact.

**(1) Factor 1: Hospitals experiencing reported surge in emergency departments or diminishing bed availability**

*Established by:* MIEMSS monitoring and Emergency Department Overload Mitigation Plan

*Threshold:* Hospitals within one region are on “yellow” alert status greater than 35% of the collective daily time for several days

**(2) Factor 2: Flu surveillance data suggest a number of hospitalizations out of proportion with previous flu seasons due to the influenza virus**

*Established by:* DHMH Influenza-associated Hospitalizations report

*Threshold:* Hospitalization rate higher than typical flu seasons

**(3) Factor 3: Increased virulence of circulating strains causing an increase in morbidity and mortality, especially in atypical populations**

*Established by:* DHMH Laboratory testing and Influenza-associated Hospitalizations and Deaths Reports

*Threshold:* Identified pandemic strain of influenza (such as 2009-2010 H1N1); increased morbidity in previously healthy, aged 18-24 and 25-49 individuals

**(4) Factor 4: Circulating strains of influenza do not match available seasonal vaccine and/or are resistant to antiviral medications**

*Established by:* CDC Morbidity and Mortality and Flu Surveillance Weekly Reports

*Threshold:* Seasonal vaccine significantly less than 50% effective

**(5) Factor 5: School absenteeism is significantly higher than typical levels**

*Established by:* DHMH ESSENCE

*Threshold:* 50% or more of Maryland local jurisdictions report greater than 15% absenteeism for three consecutive weekdays

The impact of seasonal influenza when it is both widespread geographically and high in intensity can be severe. The disease circulates throughout Maryland and can cause many residents to become ill and seek hospital treatment, increasing the number of patients in healthcare settings. Influenza simultaneously infects healthcare workers which reduces the workforce at these hospitals and community health centers. This dual impact might be severe and can greatly affect the community.

## **Additional Considerations for Mitigating a Severe Flu Impact**

### *Non-pharmaceutical Intervention and Communications*

- Conduct weekly assessment conference calls with healthcare partners and local health departments to provide situational awareness and initiate mitigation tactics
- Increase the number of public press releases and information on seasonal flu
- Operationalize portions of the State Pandemic Influenza Annex including recommendations regarding social distancing and travel restrictions as necessary
- Review potential declarations under the Catastrophic Health Emergencies (CHE) Act
- Consider enacting Pandemic Flu Attendance and Leave Policy and Advanced Sick Leave Policy
- Review policies and procedures for potential school closures with the Maryland State Department of Education (MSDE) and local public school systems
- Issue guidance and manage visitor access to patients in healthcare settings. Consider screening visitors for symptoms of acute respiratory illness before entering hospitals
- Hospitals should consider designing and installing engineering controls to reduce exposures by shielding healthcare personnel and other patients from infected individuals

### *Medical Countermeasures*

- Encourage universal vaccination effort and increase the number of vaccine clinics
- If necessary, allocate and distribute antiviral medications to local community partners for potential dispensing
- Request medications from the CDC Strategic National Stockpile (SNS) if a shortage of antivirals or equipment is identified in the commercial supply chain or State stockpile

## VII. Late Flu Activity

**DEFINITION:** *Late flu activity is characterized by decreasing levels of influenza in Maryland.*

**TIME PERIOD:** *Late flu activity is occurring when less than 15% of influenza tests from sentinel laboratories are positive. Additionally, the predominant strain of circulating influenza virus typically shifts to Type B.*

### Tips for Maryland Residents

- ❖ Continue to practice hand hygiene and cough etiquette
- ❖ Stay informed by monitoring DHMH's influenza surveillance reporting website:  
<http://phpa.dhmh.maryland.gov/influenza/fluwatch/SitePages/Home.aspx>

### State and Local Health Department Actions

#### *Epidemiological and Laboratory*

- Continue to investigate influenza outbreaks throughout Maryland
- Publish epidemiological data and flu season summary at end of season

#### *Community Prevention and Mitigation*

- Review and update Maryland Influenza Plan at end of season

### Healthcare Systems and Providers Actions

- Assess medications and personal protective equipment caches and refill stocks as necessary
- Review and update seasonal influenza plans and medical surge plans

### High Impact and Pandemic Threat Warning

- Sudden increase in reported cases of ILI late in flu season

## **VIII. Conclusion**

Influenza is a serious disease that affects many Maryland residents every year. The Maryland Department of Health and Mental Hygiene has identified and published the essential tips for Maryland residents to prevent and mitigate the spread of the flu. Additionally, this plan outlines the State's efforts in surveillance, communication, and community prevention and mitigation and guidance for healthcare systems and providers in order to dictate actions that reduce the effect the flu has on Maryland and its residents.

JURISDICTION	WEBSITE ADDRESS	PHONE NUMBER
Allegany	<a href="http://www.alleganyhealthdept.com">www.alleganyhealthdept.com</a>	301-759-5000
Anne Arundel	<a href="http://www.aahealth.org/index.asp">www.aahealth.org/index.asp</a>	410-222-7095
Baltimore City	<a href="http://www.baltimorehealth.org/">www.baltimorehealth.org/</a>	410-396-4398
Baltimore	<a href="http://www.baltimorecountymd.gov/Agencies/health/">www.baltimorecountymd.gov/Agencies/health/</a>	410-887-2243
Calvert	<a href="http://www.calverthealth.org">www.calverthealth.org</a>	410-535-5400
Caroline	<a href="http://www.carolinehd.org/">www.carolinehd.org/</a>	410-479-8030
Carroll	<a href="http://www.carrollhealthdepartment.dhmh.md.gov/">http://www.carrollhealthdepartment.dhmh.md.gov/</a>	410-857-5000
Cecil	<a href="http://www.cecilcountyhealth.org">www.cecilcountyhealth.org</a>	410-996-5550
Charles	<a href="http://www.charlescountyhealth.org/">www.charlescountyhealth.org/</a>	301-609-6900
Dorchester	<a href="http://www.dorchesterhealth.org">www.dorchesterhealth.org</a>	410-228-3223
Frederick	<a href="http://www.frederickcountymd.gov/">www.frederickcountymd.gov/</a>	301-600-1029
Garrett	<a href="http://www.garrettthealth.org">www.garrettthealth.org</a>	301-334-7777
Harford	<a href="http://www.harfordcountyhealth.com">www.harfordcountyhealth.com</a>	410-838-1500
Howard	<a href="http://www.hchealth.org">www.hchealth.org</a>	410-313-6300
Kent	<a href="http://www.kenthd.org">www.kenthd.org</a>	410-778-1350
Montgomery	<a href="http://www.montgomerycountymd.gov/hhstmpl.asp?url=/content/hhs/index.asp">www.montgomerycountymd.gov/hhstmpl.asp?url=/content/hhs/index.asp</a>	240-777-1245
Prince George's	<a href="http://www.co.pg.md.us/government/agencyindex/health/index.asp">www.co.pg.md.us/government/agencyindex/health/index.asp</a>	301-883-7879
Queen Anne's	<a href="http://www.qahealth.org/">www.qahealth.org/</a>	410-758-0720
Saint Mary's	<a href="http://www.smchd.org">www.smchd.org</a>	301-475-4330
Somerset	<a href="http://www.somersethd.org/">http://www.somersethd.org/</a>	443-523-1700
Talbot	<a href="http://www.talbothealth.org/">www.talbothealth.org/</a>	410-819-5600
Washington	<a href="http://www.washhealth.org/">www.washhealth.org/</a>	240-313-3200
Wicomico	<a href="http://www.wicomicohealth.org">www.wicomicohealth.org</a>	410-749-1244
Worcester	<a href="http://www.worcesterhealth.org">www.worcesterhealth.org</a>	410-632-1100

## Appendix A: Local Health Department Contact Information



## **Appendix B: Summary of 2014-2015 Recommendations from the Advisory Committee on Immunization Practices (ACIP)<sup>1</sup>**

### **2014-2015 Vaccine Recommendations**

- Routine annual influenza vaccination of all persons aged 6 months and older continues to be recommended
- In general, health-care providers should begin offering vaccination soon after vaccine becomes available, and if possible, by October
- All children aged 6 months--8 years who are recommended for 2 doses should receive their first dose as soon as possible after vaccine becomes available; these children should receive the second dose  $\geq 4$  weeks later

### **Considerations for the Use of Live Attenuated Influenza Vaccine and Inactivated Influenza Vaccine when Either is Available and Appropriate**

- All persons aged  $\geq 6$  months should receive influenza vaccine annually. Influenza vaccination should not be delayed to procure a specific vaccine preparation if an appropriate one is already available.
- When immediately available, LAIV should be used for healthy children aged 2 through 8 years who have no contraindications or precautions (Category A). If LAIV is not immediately available, IIV should be used. Vaccination should not be delayed to procure LAIV.
- LAIV should not be used in the following populations:
  - Persons aged  $<2$  years or  $>49$  years;
  - Those with contraindications listed in the package insert:
    - Children aged 2 through 17 years who are receiving aspirin or aspirin-containing products;
    - Persons who have experienced severe allergic reactions to the vaccine or any of its components, or to a previous dose of any influenza vaccine;
  - Pregnant women;
  - Immunosuppressed persons;
  - Persons with a history of egg allergy;
  - Children aged 2 through 4 years who have asthma or who have had a wheezing episode noted in the medical record within the past 12 months, or for whom parents report that a health care provider stated that they had wheezing or asthma within the last 12 months (Table [footnote]). [For those aged  $\geq 5$  years with asthma, recommendations are described in item 4 of this list];
  - Persons who have taken influenza antiviral medications within the previous 48 hours.

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<sup>1</sup> Full summary can be found: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6332a3.htm>